

The Theory of Predication and Licensing of Rationale Clauses

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1. Predication

One of the perturbing aspects of Williams' (1980) predication theory is his claim that NPs do not have predicates in their complement structure. He presents the following examples:

- (1) a *John's arrival dead
b the arrival of John dead
c *the election of John president (Williams (1980:218))

It appears that his claim is based solely on somewhat questionable factual judgments at best, and is completely baseless at worst. Safir (1987), for instance, gives the following examples as perfectly grammatical:

- (2) a Andy's arrival drunk
b Ellen's entrance smashed
c Rhett's return alive
d Sam's (sudden) appearance naked (Safir (1987:570))

The notion of allowing predications in the internal structures of noun phrases would be more intuitive and appealing, however, if one accepts the contention, notably by Abney (1987), that sentences and noun phrases not only share many syntactic properties but are, in fact, completely parallel in their internal structures. Observe the data below:

- (3) a Mad Max destroyed the software
b Mad Max's destruction of the software (Horrocks (1987:62))

If we assume that the VP (*destroy the software*) predicates of the subject NP (*Mad Max*) in the sentence *Mad Max destroyed the software*, and in the noun phrase, we can claim with equal plausibility that *destruction of the software* (which is construed as a maximal projection (NP) in the DP-analysis) predicates of *Mad Max's* (which is construed as a KP in the DP-analysis), and in particular D binds a predicate variable in the NP (here in the spirit of DP-analysis) (Cf. Abney (1987)). To examine the case more thoroughly, we must clarify the essential characteristics of prenominal genitive NPs (in DP) in the data available, as exemplified below:

- (4) a. John's reconstruction of an 18th century French village was damaged in the fire.
 b. John's reconstruction of the crime required deductive skills.

(Anderson (1983:5))

This, of course, would raise a number of highly complex issues, which we cannot adequately deal with here. (Cf., for example, Anderson (1983), Safir (1987), and the references cited therein.)

Digressing somewhat, the previously mentioned DP-analysis might provide direct support for the claim by Roeper (cf. Roeper (1987)) that "implicit arguments" are syntactically real and that they are best analyzed as PROs, in the sense that the symmetrical structures the DP-analysis makes available for sentences and noun phrases hosting PROs inside are all the more plausible. Although DP-analysis appears to be conceptually attractive (especially from the X'-theoretic viewpoint), one should not ignore the fact that certain data can be problematic. For example, advocates of DP-analysis have yet to come up with a plausible account of the following data:

- (5) a. The leaves_i should not be bothered while PRO_i dessicating.
 b. The leaves_i should not be bothered during PRO_i dessication.
 c. *You should not bother the leaves_i while PRO_i dessicating.
 d. You should not bother the leaves_i during PRO_i dessication.

(Williams (1985:298))

Given these examples, it can be argued that PROs in sentences and PROs in noun phrases are two different entities, since they do not share the control pattern when the controller is the object. Although this may not represent a strong argument, observe the data below:

- (6) You are not supposed to leave the check-in counter during PRO_i examination of your passport.

- (7) *You are not supposed to leave the check-in counter while PRO_i examining your passport.

It is usually assumed that either the PRO has a controller or it is interpreted as *arb* (arbitrary). (6) runs counter to that assumption, since the non-controlled PRO there does not have *arb* interpretation (the PRO is best understood to represent those responsible for the security check.). This indicates that PROs in noun phrases (DPs), unlike those in sentences, can exist without a controller and that they are, in fact, different entities.

2. Licensing of Rationale Clauses

2.1. Syntactic Approach

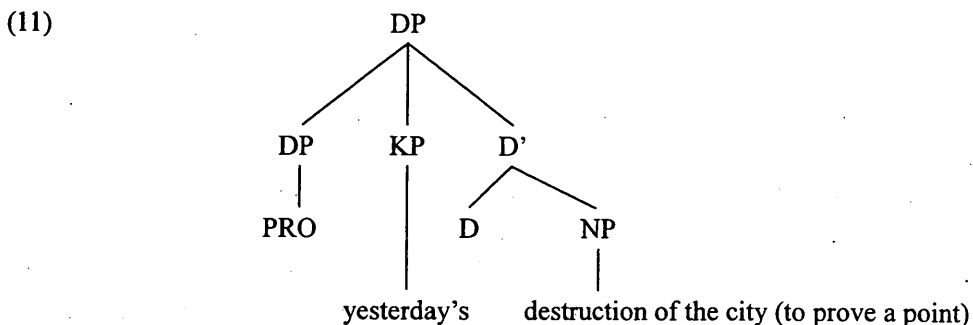
Roeper (1987) states that rationale clauses are licensed only if Agent roles are syntactically realized in matrix clauses. His examples are given below:

- (8) the PRO destruction of the city [PRO to prove a point]
 (9) *the city's destruction to prove a point (Roeper (1987:280))

Assuming that control relations are determined at LF, this accounts for the ungrammatical status of (9), in which NP preposing leaves no room for an Agent PRO. Williams (1985) points out problems inherent in Roeper's (1987) analysis. He claims that temporal adjuncts can replace the Agent PROs without affecting grammaticality:

- (10) yesterday's destruction of the city to prove a point

With regards to Williams' (1985) objections, advocates of DP-analysis would argue (as in fact Abney (1987) does) that their analysis can provide a satisfactory solution. Look at the configuration below:



In the above configuration PRO and the temporal adjunct (*yesterday(s)*) co-occur. There is no problem of “governed PRO” in this analysis, with the NP (*destruction of the city*) assigning Possessor θ -role (here construed broadly) to *yesterday's* but not to PRO. Initially this analysis seems to support Roeper’s (1987) argument, but actually it offers no explanation for example (9), which is what Roeper (1987) attempts to explain in the first place:

(9) *the city’s destruction to prove a point (Roeper (1987:280))

It seems, therefore, that DP-analysis is not suitable for our purposes. The somewhat cursory discussion above indicates either that the PROs in noun phrases posited by Roeper (1987) and others are non-existent—or at least are distinct from what they are supposed to be—or that the notion of rationale clauses confirming Agent PROs in noun phrases is not particularly convincing. We take the latter view. For example, in the case of rationale clauses in sentences, the precise characterization of how they are licensed is no trivial matter, and we have no evidence that the situation is radically different in the case of rationale clauses in noun phrases. For now we will put aside the vigorous research that is under way on the properties of sentences such as those given below (cf. Lasnik (1988), Williams (1985), and Roeper (1987) for representative works) and proceed at an intuitive level:

(12) *The ship was sunk by John to become a hero. (Lasnik (1988:12))

(13) The door opens for everyone to come in at four o’clock. (Roeper (1987:276))

The notion of rationale clauses (in sentences) being licensed by intentional Agents is straightforward and intuitive. However, numerous works in the literature demonstrate that this notion is not applicable to all rationale clauses, pointing out sentences like the following:

(14) Grass is green [PRO to promote photosynthesis]. (Williams (1985:310))

(15) Flamingoes are pink [PRO to attract the opposite sex].

(16) Animals may be unattractive [PRO to scare enemies]. (Roeper (1987:299))

Roeper (1987) admits that in sentences such as these only very loose semantic connections bear on the licensing of rationale clauses. However, he claims that there are tight syntactic connections that make (14)-(16) grammatical, and that available implicit Agents control PROs in the above sentences. Taking another perspective, it can also be maintained that *grass’ being green*, *flamingoes’ being pink*, and *animals’ being unattractive* control PROs in (14)-(16). The latter idea in the linguistic literature (cf. Williams (1985)) is, however, untenable, as is made

clear by the examples below:

- (17) The new BMW 745i is astoundingly high-powered [PRO to dash to 100km/h in five seconds].
- (18) The new FSX will be electronically undetectable [PRO to bomb the Russian military installations with ease and accuracy].

While Røeper (1987) can probably address the problem raised by (17)-(18) by claiming that *the new BMW 745i* and *the new FSX* are Agents, the other possible solution (the *event* hypothesis) cannot be explored, since the BMW's high power cannot dash to 100km/h and FSX' electronic undetectability cannot bomb the Russian military installations. Similar examples are given below:

- (19) Flamingoes are light-colored to survive in extreme temperatures.
- (20) Most animals are four-footed to run away from enemies fast.

On the positive side, Williams (1985) and others adequately account for the following example, although Røeper (1985) cannot:

- (21) Roses_i are thorny [PRO to protect them_i from gardeners].

In (21), the Principle B of the binding theory would be violated if *roses* controls PRO. Thus, roses' being thorny or something similar controls PRO. The situation is therefore highly complex and a new viewpoint is probably required to find a better solution.

Given below are some examples of rationale clauses that are taken from our corpus (italicizations are ours):

- (22) "I don't know how you can neglect the religious elements. I mean, they're there [for everyone to see them]." (Newsweek (1989), Mar.6, p.9)
- (23) CW (Conventional Wisdom) still thinks he's a featherweight, but there's no gaffe yet [PRO to KO him with].» (Newsweek (1989), Jan.9, p.5)
- (24) In business, too, we're out [PRO to make stars out of our partners as we hurdle around the world in trade, automotives, finance, and other business areas in addition to construction]. (Newsweek (1989), Feb.20, p.21)
- (25) Conventions don't exist for the networks. They exist [PRO to network]. (Newsweek (1989), Sept.11, p.6)

- (26) The precautions aren't all [PRO to protect customers]: by next year Dial-A-Fax hopes to retail lists from its own directory. (Newsweek (1989), Feb.6, p.18)
- (27) But if connections are [PRO to get a job or enter college], we then have to prove ourselves or our inadequacies will be found out. (Newsweek (1989), Oct.30, p.15)

None of these examples involves Agents, although linguists in support of Roeper (1987) can probably identify implicit Agents. Roeper (1987) and others note that the semantic connections licensing rationale clauses are very loose, which is in marked contrast to the quite tight syntactic connections licensing rationale clauses. Example (22) seems to indicate, however, that the syntactic connections licensing rationale clauses are, in fact, also very loose, which is in contrast to Roeper's claim. In (22) we do not find Agent in *they're there*, nor do we find any control relation or null operator movement in *they're there for everyone to see them*. Compare (22) with purpose clause (23) where there are both control relation and null operator movement. For (24) and (25), the PROs are controlled by *we* and *they*, respectively (there might be dissenting argument in the case of (24) which holds that "our being out" controls PRO, but it is very clear in the case of (25)). When we turn to (26) and (27), however, we encounter a different situation. Although it could be claimed in the case of (26) that *the precautions* controls PRO, the most natural reading of (26) requires *Dial-A-Fax (Corp.)* or at least those people who are affiliated with the corporation as the controller of PRO. In the case of (27) it would be quite unreasonable to claim that *connections* controls PRO (can connections get a job or even enter college?), so either the author advocates *we* as the controller of PRO or the PRO itself is PRO_{arb}. Furthermore, if we consider sentences such as that given below, the situation becomes more complex:

- (28) But if the connections are [*PRO to grab lucrative deals or curry favor with people in power*], prosecutors need to crack down on the Livedoor Corp. management or the very foundation of our democratic society will be in jeopardy.

In example (28), the controller of PRO is not *the connections* or *prosecutors* and PRO is not PRO_{arb}. Rather the controller must be *Livedoor Corp. management*. If our understanding of the proposals made in Roeper (1987) and Williams (1985) is correct, neither theory offers a satisfactory explanation.

2.2. Semantic Approach

The foregoing discussion moves us away from the previous syntactic analyses represented by works such as Roeper (1987) and Williams (1985) and towards the semantic

analyses supported by linguists such as Bach, Chierchia, Dowty, Farkas, and Ladusaw. Given below are some examples they present:

(29) The exhibition is here in order to satisfy the people.

(30) *John hates *War and Peace* in order to annoy his brother.

(31) *They opened the window in order to get the sun to shine.

(Bach (1982:53))

(32) The shop window has a big sale sign in it in order to attract customers.

(33) *The weather has been good lately in order to please the tourists.

(Farkas (1988:36))

(Cf. Bach (1982), Chierchia (1984), Ladusaw and Dowty (1988), and Farkas (1988) for representative works.)

If we look beyond rationale clauses and consider control phenomena in general, wavering control relations are not new. Classical examples are sentences like the following:

(34) John_i promised Bill [PRO_i to come].

(35) John promised Bill_i [PRO_i to be allowed to leave].

(36) John asked Bill_i [PRO_i to come].

(37) John_i asked Bill [PRO_i to be allowed to leave].

Not all speakers will find sentences (35) and (37) well formed, but Ladusaw and Dowty (1988) report that, given appropriate contexts, such sentences can be perfectly acceptable:

(38) John, a prisoner, was reviewed today by the parole board to determine whether he was eligible for an early parole. A number of behavior problems on his record argued against his release. However, he made such a favorable impression in his interview *that he finally convinced the parole board to be allowed to take an early parole after all.*

(Ladusaw and Dowty (1988:72))

Thus, the control phenomena exhibited by rationale clauses which deviate from the predictions made by Roeper (1987), Williams (1985), and others are perhaps not so unusual as they might appear once they are viewed in a broader perspective.

2.3. Summary

Our discussion so far can be summarized as follows. When matrix clauses have obvious Agents, rationale clauses, if they have PROs, are controlled by the Agents. When matrix

clauses have no obvious Agents, almost any constituent can serve as the controller, subject perhaps to various pragmatic factors. In addition, the notion of rationale clauses confirming the agenthood of matrix clauses, as it stands now, is untenable. The above-mentioned pragmatic factors and others move us way from the syntactic analyses represented by works such as Roeper (1987) and Williams (1985) and towards the semantic analyses supported by linguists such as Bach, Chierchia, Dowty, Farkas, and Ladusaw.

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